



SEQUENCE LISTING

<110> KIM, Jong-Bae

<120> CRUDE EXTRACT FROM Viscum album coloratum, AND PROTEINS
AND LECTINS ISOLATED THEREFROM

<130> Korean Mistletoe Lectin

<140> 09/627,165

<141> 2000-07-27

<160> 16

<210> 1

<211> 762

<212> DNA

<213> Viscum album coloratum

<220>

<221> misc_feature

<400> 1

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cgtcagtcta cgatccccgt ctcggatgcg caaagatttg tgttggtgga actcaccaat
180
caggggggag actcgatcac ggccgccatc gacgttacta acctgtacgt ggtggcttac
240
caagcaggcg accaatccta ctttttgcg gacgcaccag acggcgcgga aaggcatctc
300
ttcaccggca ccaccagatc ctccctccca ttcaccggaa gctacacaga tctggagcga
360
ttcgccggtc atagggacca gatccctctg ggtagagagg aactcattca atccgtctcg
420
gcccttcgtt ttccgggcag caaactcgt gcccaagctc gttcctttat catcctcatt
480
cagatgatct ccgaggccgc cagattcaat cccatcttat ggagggctcg ccaatacatt
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agcagtgggg ggtcatttct gccagacacg tacattctcc agctggagac gagttggggg
600
caacaatcca cgcaagttca gcactcgacg gatggcggtt ttaataaccc aattcggttg
660
actatatcca ctggtgtctt cgtgacgttg agcaatgttc gcgacgtgat cgccagctta

720

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762

<210> 2

<211> 254

<212> PRT

<213> Viscum album coloratum

<220>

<221> misc_feature

<400> 2

Tyr Glu Arg Leu Arg Leu Arg Val Thr His Gln Thr Thr Gly Asp Glu
 1 5 10 15

Tyr Phe Arg Phe Ile Thr Leu Leu Arg Asp Tyr Val Ser Ser Gly Ser
 20 25 30

Phe Ser Asn Glu Ile Pro Leu Leu Arg Gln Ser Thr Ile Pro Val Ser
 35 40 45

Asp Ala Gln Arg Phe Val Leu Val Glu Leu Thr Asn Gln Gly Gly Asp
 50 55 60

Ser Ile Thr Ala Ala Ile Asp Val Thr Asn Leu Tyr Val Val Ala Tyr
 65 70 75 80

Gln Ala Gly Asp Gln Ser Tyr Phe Leu Arg Asp Ala Pro Asp Gly Ala
 85 90 95

Glu Arg His Leu Phe Thr Gly Thr Thr Arg Ser Ser Leu Pro Phe Thr
 100 105 110

Gly Ser Tyr Thr Asp Leu Glu Arg Phe Ala Gly His Arg Asp Gln Ile
 115 120 125

Pro Leu Gly Arg Glu Glu Leu Ile Gln Ser Val Ser Ala Leu Arg Phe
 130 135 140

Pro Gly Ser Asn Thr Arg Ala Gln Ala Arg Ser Phe Ile Ile Leu Ile
 145 150 155 160

Gln Met Ile Ser Glu Ala Ala Arg Phe Asn Pro Ile Leu Trp Arg Ala
 165 170 175

Arg Gln Tyr Ile Ser Ser Gly Gly Ser Phe Leu Pro Asp Thr Tyr Ile
 180 185 190
 Leu Gln Leu Glu Thr Ser Trp Gly Gln Gln Ser Thr Gln Val Gln His
 195 200 205
 Ser Thr Asp Gly Val Phe Asn Asn Pro Ile Arg Leu Thr Ile Ser Thr
 210 215 220
 Gly Val Phe Val Thr Leu Ser Asn Val Arg Asp Val Ile Ala Ser Leu
 225 230 235 240
 Ala Ile Met Leu Phe Val Cys Glu Asp Arg Pro Ser Ser Ser
 245 250

<210> 3
 <211> 762
 <212> DNA
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 3

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 120
 cggcagtcta ctgtccccgt ctgggatacg cagagatttg tgttggtgga actcagcaat
 180
 caggggggag actcgatcac ggccgccatc gacgttacca atctgtacgt ggtggcttac
 240
 caagcaggca accaatccta ctttttgccg gacgcacctc gcggcgcgga aacgtatctc
 300
 ttcaccggca ccacccgac ctctctccca ttcaacggaa gctaccctga tctggagcga
 360
 tacgccggac atagggacca gatccctctc ggtatagacc aactcattca atccgtctcg
 420
 gcccttcgtt ttccggggcag caacactcgt gcccaagctc gttcctttat catcctcatt
 480
 cagatgatct ccgaggccgc cagattcaat cccatcttat ggagggctcg ccaatacatt
 540
 agcagtgggg ggtcatttct gccagacacg tacattctcc agctggagac gagttggggg
 600
 caacaatcca cgcaagttca gcactcgacg gatggcggtt ttaataaccc aattcggttg

660
 actatatcca ctggtgtctt cgtgacgttg agcaatgttc gcgacgtgat cgccagcyta
 720
 gcgatcatgt tgtttgtatg cgaggaccgg ccattcttcct ct
 762

<210> 4
 <211> 254
 <212> PRT
 <213> Viscum album coloratum

<220>

<221> misc_feature
 <222> 240
 <223> Xaa = any amino acid

<400> 4
 Tyr Glu Arg Leu Arg Leu Arg Val Thr His Gln Thr Thr Gly Asp Gln
 1 5 10 15

Tyr Phe Lys Phe Ile Thr Leu Leu Arg Asp His Val Ser Ser Gly Ser
 20 25 30

Leu Ser Asn Gln Ile Pro Leu Leu Arg Gln Ser Thr Val Pro Val Ser
 35 40 45

Asp Thr Gln Arg Phe Val Leu Val Glu Leu Ser Asn Gln Gly Gly Asp
 50 55 60

Ser Ile Thr Ala Ala Ile Asp Val Thr Asn Leu Tyr Val Val Ala Tyr
 65 70 75 80

Gln Ala Gly Asn Gln Ser Tyr Phe Leu Arg Asp Ala Pro Arg Gly Ala
 85 90 95

Glu Thr Tyr Leu Phe Thr Gly Thr Thr Arg Ser Ser Leu Pro Phe Asn
 100 105 110

Gly Ser Tyr Pro Asp Leu Glu Arg Tyr Ala Gly His Arg Asp Gln Ile
 115 120 125

Pro Leu Gly Ile Asp Gln Leu Ile Gln Ser Val Ser Ala Leu Arg Phe
 130 135 140

Pro Gly Ser Asn Thr Arg Ala Gln Ala Arg Ser Phe Ile Ile Leu Ile
 145 150 155 160

Gln Met Ile Ser Glu Ala Ala Arg Phe Asn Pro Ile Leu Trp Arg Ala
 165 170 175
 Arg Gln Tyr Ile Ser Ser Gly Gly Ser Phe Leu Pro Asp Thr Tyr Ile
 180 185 190
 Leu Gln Leu Glu Thr Ser Trp Gly Gln Gln Ser Thr Gln Val Gln His
 195 200 205
 Ser Thr Asp Gly Val Phe Asn Asn Pro Ile Arg Leu Thr Ile Ser Thr
 210 215 220
 Gly Val Phe Val Thr Leu Ser Asn Val Arg Asp Val Ile Ala Ser Xaa
 225 230 235 240
 Ala Ile Met Leu Phe Val Cys Glu Asp Arg Pro Ser Ser Ser
 245 250

<210> 5
 <211> 768
 <212> DNA
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 5
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 120
 cctccgtcaa tcccgggtctc ctctgcgag agatttgtgt tgggtggaact cacaaatcag
 180
 ttgggaaagt gggaagactc gatcacggcc gccatcgacg ttaccaatct gtacgtggtg
 240
 gcttaccaag caggcgacca atcctacttt ttgcgcgacg caccagacgg cgcggaaagg
 300
 catctcttca ccggcaccac cagatcctct cttcctttca acggaagcta cgctgatctg
 360
 gagcgggtacg ccggacatag ggaccggatc cctctgggta gagagccact catacgatcc
 420
 gtctcggcgc ttgattatcc cggcggcagc acgcgcgccc aagccagttc cattattatc
 480
 gtcattcaga tgatctccga ggcgggcaga ttcaatccca tcctatggag ggctcgccaa
 540

tacattaaca gtggggtgtc atatcttcca gacgtgtaca tgctggagct ggaggcgagt
 600
 tggggccaac aatcgacca agtccagcag tgcaccgatg gcgttttttaa taaccaatt
 660
 cggttgggta tatccaccgg caacttcgtg tggttgagca atgttcgcga cgtgatcgcc
 720
 agcttgggga tcatggtggt tgtatgcagg gaccggtcat ctteccct
 768

<210> 6
 <211> 256
 <212> PRT
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 6

Tyr Glu Arg Leu Arg Leu Arg Val Thr His Gln Thr Thr Gly Asp Glu
 1 5 10 15
 Tyr Phe Arg Phe Ile Lys Leu Leu Arg Asp Ser Val Ser Ser Gly Ser
 20 25 30
 Phe Ser Asn Asp Ile Pro Leu Leu Pro Pro Ser Ile Pro Val Ser Ser
 35 40 45
 Ala Gln Arg Phe Val Leu Val Glu Leu Thr Asn Gln Leu Gly Lys Trp
 50 55 60
 Glu Asp Ser Ile Thr Ala Ala Ile Asp Val Thr Asn Leu Tyr Val Val
 65 70 75 80
 Ala Tyr Gln Ala Gly Asp Gln Ser Tyr Phe Leu Arg Asp Ala Pro Asp
 85 90 95
 Gly Ala Glu Arg His Leu Phe Thr Gly Thr Thr Arg Ser Ser Leu Pro
 100 105 110
 Phe Asn Gly Ser Tyr Ala Asp Leu Glu Arg Tyr Ala Gly His Arg Asp
 115 120 125
 Arg Ile Pro Leu Gly Arg Glu Pro Leu Ile Arg Ser Val Ser Ala Leu
 130 135 140
 Asp Tyr Pro Gly Gly Ser Thr Arg Ala Gln Ala Ser Ser Ile Ile Ile

145 150 155 160
 Val Ile Gln Met Ile Ser Glu Ala Ala Arg Phe Asn Pro Ile Leu Trp
 165 170 175
 Arg Ala Arg Gln Tyr Ile Asn Ser Gly Val Ser Tyr Leu Pro Asp Val
 180 185 190
 Tyr Met Leu Glu Leu Glu Ala Ser Trp Gly Gln Gln Ser Thr Gln Val
 195 200 205
 Gln Gln Ser Thr Asp Gly Val Phe Asn Asn Pro Ile Arg Leu Gly Ile
 210 215 220
 Ser Thr Gly Asn Phe Val Trp Leu Ser Asn Val Arg Asp Val Ile Ala
 225 230 235 240
 Ser Leu Gly Ile Met Val Phe Val Cys Arg Asp Arg Ser Ser Ser Pro
 245 250 255

<210> 7
 <211> 797
 <212> DNA
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 7

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 gtctcgacgt cccagagggc gattaccacg atggaagtcg gatacagttg tggccctgca
 120
 agtccaactc cgatcagaat cagctgtgga cgatcagaag ggatggaacc attcgatcta
 180
 atggaagggtg cttgacgacc tatgggtata ctgcgggcag ctatataatg atctacgact
 240
 gtaatagagg ggggtgggac cttactactt ggcagataag gggcaatgga atcatcctta
 300
 atccaagatc catgatggtg atcggaaacac catccgggag ccgcggaacc cgtggcacta
 360
 cttttactct gcaaactctg ggttactcat taggacaggg ctggcttgcc agcaatgata
 420
 ccgctcctcg cgaggtaacc atatatggtt tccgcgatca ttgcatggaa actagtggag
 480
 ggaaagtgtg ggttgggact tgtgtgagtg gcaagcagaa ccaaagatgg gctttgtacg

540
 gggatgggttc cattcgcccg aaaccttacc aagaccaatg cctcacctct cagggagact
 600
 ccgtttagatc cgtaatcaat ttatttagct gcaccgctgg atcgccaagg caacgatggg
 660
 tatttaccaa taaagggggcc attttgaatt taaagaatag gttggccatg gatgtggcgg
 720
 aatcaaatcc aagcctccgc cgaataatca tcttttcagt caotggaaat ccaaatacaa
 780
 tgtggcttcc cgtgccca
 797

<210> 8
 <211> 266
 <212> PRT
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 8

Asp Asp Val Thr Cys Thr Thr Ser Glu Pro Thr Val Arg Phe Val Gly
 1 5 10 15
 Arg Asn Gly Leu Cys Leu Asp Val Pro Glu Gly Asp Tyr His Asp Gly
 20 25 30
 Ser Arg Ile Gln Leu Trp Pro Cys Lys Ser Asn Ser Asp Gln Asn Gln
 35 40 45
 Leu Trp Thr Ile Arg Arg Asp Gly Thr Ile Arg Ser Asn Gly Arg Cys
 50 55 60
 Leu Thr Thr Tyr Gly Tyr Thr Ala Gly Ser Tyr Ile Met Ile Tyr Asp
 65 70 75 80
 Cys Asn Arg Gly Gly Trp Asp Leu Thr Thr Trp Gln Ile Arg Gly Asn
 85 90 95
 Gly Ile Ile Leu Asn Pro Arg Ser Met Met Val Ile Gly Thr Pro Ser
 100 105 110
 Gly Ser Arg Gly Thr Arg Gly Thr Thr Phe Thr Leu Gln Thr Leu Gly
 115 120 125
 Tyr Ser Leu Gly Gln Gly Trp Leu Ala Ser Asn Asp Thr Ala Pro Arg

130 135 140
 Glu Val Thr Ile Tyr Gly Phe Arg Asp His Cys Met Glu Thr Ser Gly
 145 150 155 160
 Gly Lys Val Trp Val Gly Thr Cys Val Ser Gly Lys Gln Asn Gln Arg
 165 170 175
 Trp Ala Leu Tyr Gly Asp Gly Ser Ile Arg Pro Lys Pro Tyr Gln Asp
 180 185 190
 Gln Cys Leu Thr Ser Gln Gly Asp Ser Val Arg Ser Val Ile Asn Leu
 195 200 205
 Phe Ser Cys Thr Ala Gly Ser Pro Arg Gln Arg Trp Val Phe Thr Asn
 210 215 220
 Lys Gly Ala Ile Leu Asn Leu Lys Asn Arg Leu Ala Met Asp Val Ala
 225 230 235 240
 Glu Ser Asn Pro Ser Leu Arg Arg Ile Ile Ile Phe Ser Val Thr Gly
 245 250 255
 Asn Pro Asn Gln Met Trp Leu Pro Val Pro
 260 265

<210> 9
 <211> 789
 <212> DNA
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 9

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 tgcgtcgacg tccgaaatgg aaaattccac gatggaaatc cgatacagtt gtggccctgc
 120
 aagtccaaca ccgataggaa tcagctgtgg acgatcagaa gggatggaac cattcgatct
 180
 aatagcaagt gcttgaccac ctatggctat cgtgatggca tgtatgtaat gatctacaac
 240
 tgtaatacgg ccgtgcggga ggccactatt tggcaaatat gggaaaatgg aaccatcggt
 300
 aatccaagat ccagtctggt actgggagca gcactctggaa acagccgcac taggcttact

360
 gtgcaaacac aggcttactc gttgggacag ggctggcttg ccagcaatga taccgcccct
 420
 cgcgaggtaa ccatatacgg attccgtgac ctttgcattg aagctaattg atcgagtgtg
 480
 tgggtggaga cttgtgtgag taacaagcag aaccaaaaat gggctttgta cggggatggg
 540
 tctatacggc ccaaacaaaa ccgaaaccaa tgcctcacct gccagaaaga ctccgtttca
 600
 accgtaatac atattgttag ctgcagcgca ggatcgtctg ggcagcgatg ggtgtttacc
 660
 aataaaggga ccattttgaa tttaaagaat gggtttgtca tggatgtggc gcaatcaaat
 720
 ccaagcctcc gccgaataat catctaccca gccaccggaa agcctaatac aatgtggctt
 780
 cccgtgcca
 789

<210> 10
 <211> 263
 <212> PRT
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 10

Asp Asp Gly Thr Cys Thr Ala Ser Glu Pro Thr Val Arg Ile Val Gly
 1 5 10 15

Leu Asn Gly Leu Cys Val Asp Val Arg Asn Gly Lys Phe His Asp Gly
 20 25 30

Asn Pro Ile Gln Leu Trp Pro Cys Lys Ser Asn Thr Asp Arg Asn Gln
 35 40 45

Leu Trp Thr Ile Arg Arg Asp Gly Thr Ile Arg Ser Asn Ser Lys Cys
 50 55 60

Leu Thr Thr Tyr Gly Tyr Arg Asp Gly Met Tyr Val Met Ile Tyr Asn
 65 70 75 80

Cys Asn Thr Ala Val Arg Glu Ala Thr Ile Trp Gln Ile Trp Glu Asn
 85 90 95

Gly Thr Ile Val Asn Pro Arg Ser Ser Leu Val Leu Gly Ala Ala Ser

100 105 110
 Gly Asn Ser Arg Thr Arg Leu Thr Val Gln Thr Gln Ala Tyr Ser Leu
 115 120 125
 Gly Gln Gly Trp Leu Ala Ser Asn Asp Thr Ala Pro Arg Glu Val Thr
 130 135 140
 Ile Tyr Gly Phe Arg Asp Leu Cys Met Glu Ala Asn Gly Ser Ser Val
 145 150 155 160
 Trp Val Glu Thr Cys Val Ser Asn Lys Gln Asn Gln Lys Trp Ala Leu
 165 170 175
 Tyr Gly Asp Gly Ser Ile Arg Pro Lys Gln Asn Arg Asn Gln Cys Leu
 180 185 190
 Thr Cys Gln Lys Asp Ser Val Ser Thr Val Ile Asn Ile Val Ser Cys
 195 200 205
 Ser Ala Gly Ser Ser Gly Gln Arg Trp Val Phe Thr Asn Lys Gly Thr
 210 215 220
 Ile Leu Asn Leu Lys Asn Gly Leu Val Met Asp Val Ala Gln Ser Asn
 225 230 235 240
 Pro Ser Leu Arg Arg Ile Ile Ile Tyr Pro Ala Thr Gly Lys Pro Asn
 245 250 255
 Gln Met Trp Leu Pro Val Pro
 260

<210> 11
 <211> 789
 <212> DNA
 <213> Viscum album coloratum

<220>

<221> misc_feature

<400> 11

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 120
 aagtccaaca ccgataggaa tcagctgtgg acgatcagaa gggatggaac cattcgatct

180
 aatagcaagt gcttgaccac ctatggctat cgtgatggca tgtatgtcat gatctacaac
 240
 tgtaatacgg ccgtgcggga ggccactatt tggcaaatat gggaaaatgg aaccatcggt
 300
 aatccaaaat ccagtctggt actgggagca gcatctggaa gcagccgcac tacgcttact
 360
 gtgcaaacac aggcttactc gttgggacag ggctggcttg ccagccatga tacagcccct
 420
 cgcgaggtaa ccatatacgg tttccgtgac ctttgcattg aagctaattg atcgagtgtg
 480
 tkgggtggaga cttgtgtgag tcacaagcag aaccaaaaat gggctttgta cggggatggg
 540
 tctatacgcc ccaaacaaaa ccgaaaccaa tgcctcacct gccagaaaga ctccgtttca
 600
 accgtaatca atattgttag ctgcagcgca ggatcgtctg ggcagcgatg ggtgtttacc
 660
 aataaaggga ccattttgaa tttaaagaat gggttgggtcc tggatgtggc gcaatcaa
 720
 ccaagcctcc gccgaataat catctacca gccaccggaa agcctaataa aatgtggctt
 780
 cccgtgcca
 789

<210> 12
 <211> 263
 <212> PRT
 <213> Viscum album coloratum

<220>

<221> misc_feature
 <222> 161
 <223> Xaa = any amino acid

<400> 12

Asp	Asp	Gly	Thr	Cys	Thr	Pro	Ser	Glu	Pro	Thr	Val	Trp	Ile	Val	Gly
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Leu	Asn	Gly	Leu	Cys	Val	Asp	Val	Arg	His	Gly	Lys	Phe	His	Asp	Gly
			20					25						30	
Asn	Pro	Ile	Gln	Leu	Trp	Pro	Cys	Lys	Ser	Asn	Thr	Asp	Arg	Asn	Gln
		35					40					45			
Leu	Trp	Thr	Ile	Arg	Arg	Asp	Gly	Thr	Ile	Arg	Ser	Asn	Ser	Lys	Cys
	50					55					60				

Leu Thr Thr Tyr Gly Tyr Arg Asp Gly Met Tyr Val Met Ile Tyr Asn
65 70 75 80

Cys Asn Thr Ala Val Arg Glu Ala Thr Ile Trp Gln Ile Trp Glu Asn
85 90 95

Gly Thr Ile Val Asn Pro Lys Ser Ser Leu Val Leu Gly Ala Ala Ser
100 105 110

Gly Ser Ser Arg Thr Thr Leu Thr Val Gln Thr Gln Ala Tyr Ser Leu
115 120 125

Gly Gln Gly Trp Leu Ala Ser His Asp Thr Ala Pro Arg Glu Val Thr
130 135 140

Ile Tyr Gly Phe Arg Asp Leu Cys Met Glu Ala Asn Gly Ser Ser Val
145 150 155 160

Xaa Val Glu Thr Cys Val Ser His Lys Gln Asn Gln Lys Trp Ala Leu
165 170 175

Tyr Gly Asp Gly Ser Ile Arg Pro Lys Gln Asn Arg Asn Gln Cys Leu
180 185 190

Thr Cys Gln Lys Asp Ser Val Ser Thr Val Ile Asn Ile Val Ser Cys
195 200 205

Ser Ala Gly Ser Ser Gly Gln Arg Trp Val Phe Thr Asn Lys Gly Thr
210 215 220

Ile Leu Asn Leu Lys Asn Gly Leu Val Leu Asp Val Ala Gln Ser Asn
225 230 235 240

Pro Ser Leu Arg Arg Ile Ile Ile Tyr Pro Ala Thr Gly Lys Pro Asn
245 250 255

Gln Met Trp Leu Pro Val Pro
260

<210> 13

<211> 357

<212> DNA

<213> Viscum album coloratum

<220>

<221> misc_feature
 <222> 19, 57, 190, 331
 <223> "n" = any single nucleotide

<400> 13
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ccaccaaaaca tgtacatgct cgagctggag acgagttggg gtcgacaatc cacccaagtc
 120

cagcagtcca aggatggcat ttttaataacc caaataagat tgcagatttc cgccggtaac
 180

tttgtgacgn tgagcaatgt tcgcgacgtg atctccagct tggcgatcat gttgttcgaa
 240

tgcagtggtc ggccattctc ctctctcgac cacccttcgc cgctgctcct aaggtcgcgc
 300

gtggatgagg ccaacgatgt cacctgcact ntttccgaac ccaccgtgag catcgta
 357

<210> 14
 <211> 119
 <212> PRT
 <213> Viscum album coloratum

<220>

<221> misc_feature
 <222> 7, 64, 111
 <223> Xaa = any amino acid

<400> 14

Ala	Arg	Phe	Asn	Pro	Ile	Xaa	Trp	Arg	Leu	Arg	Arg	Gln	Ile	Asn	Ser
1				5					10					15	

Gly	Glu	Ser	Ser	Pro	Pro	Asn	Met	Tyr	Met	Leu	Glu	Leu	Glu	Thr	Ser
			20					25					30		

Trp	Gly	Arg	Gln	Ser	Thr	Gln	Val	Gln	Gln	Ser	Lys	Asp	Gly	Ile	Phe
		35					40					45			

Asn	Thr	Gln	Ile	Arg	Leu	Gln	Ile	Ser	Ala	Gly	Asn	Phe	Val	Thr	Xaa
	50					55					60				

Ser Asn Val Arg Asp Val Ile Ser Ser Leu Ala Ile Met Leu Phe Glu
65 70 75 80

Cys Ser Gly Arg Pro Phe Ser Ser Leu Asp His Pro Ser Pro Leu Leu
85 90 95

Leu Arg Ser Val Val Asp Ala Ala Asn Asp Val Thr Cys Thr Xaa Ser
100 105 110

Glu Pro Thr Val Arg Ile Val
115

<210> 15

<211> 522

<212> DNA

<213> Viscum album coloratum

<220>

<221> misc_feature

<400> 15

tacacagatc tggagcgata cgccggtcat agggaccaga tccctctggg tatagaggaa
60

ctcattcaat ccgtctcggc gcttcgttat ccaggcggca gcacccgggc ccaagctcgt
120

tcccttataa tcctcattca gatgatctcc gaggccgca gattcaatcc catcttttgg
180

agggctcgcc aatacattaa cagcggggag tcatttcttc ccgacatgta catgctcgag
240

ctggagacta gttggggcca acaatccaag caagtccagc agtctacgga tggcgttttt
300

aataacccat ttcggttggg tatatccacc ggtaacttcg tgacgttgag caatgttcgc
360

gacgtgatcg ccagcttagc gatcatgttg tttgtatgta gggaccgacc atcttctctc
420

gacgtgcgct attggccgct ggtcatacga cccgtcttgg aaaatagcgg cgccgctcgac
480

gatgttacct gcactgcttc cgaaccacc gtgcgcatcg ta
522

<210> 16

<211> 174

<212> PRT

<213> Viscum album coloratum

<220>

<221> misc_feature

<400> 16

Tyr Thr Asp Leu Glu Arg Tyr Ala Gly His Arg Asp Gln Ile Pro Leu
1 5 10 15

Gly Ile Glu Glu Leu Ile Gln Ser Val Ser Ala Leu Arg Tyr Pro Gly
20 25 30

Gly Ser Thr Arg Ala Gln Ala Arg Ser Leu Ile Ile Leu Ile Gln Met
35 40 45

Ile Ser Glu Ala Ala Arg Phe Asn Pro Ile Phe Trp Arg Ala Arg Gln
50 55 60

Tyr Ile Asn Ser Gly Glu Ser Phe Leu Pro Asp Met Tyr Met Leu Glu
65 70 75 80

Leu Glu Thr Ser Trp Gly Gln Gln Ser Thr Gln Val Gln Gln Ser Thr
85 90 95

Asp Gly Val Phe Asn Asn Pro Phe Arg Leu Gly Ile Ser Thr Gly Asn
100 105 110

Phe Val Thr Leu Ser Asn Val Arg Asp Val Ile Ala Ser Leu Ala Ile
115 120 125

Met Leu Phe Val Cys Arg Asp Arg Pro Ser Ser Ser Asp Val Arg Tyr
130 135 140

Trp Pro Leu Val Ile Arg Pro Val Leu Glu Asn Ser Gly Ala Val Asp
145 150 155 160

Asp Val Thr Cys Thr Ala Ser Glu Pro Thr Val Arg Ile Val
165 170